SPP330V1.0 User Manual

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1. Introduction

This document describes the operation of the firmware of the SPP330V1.0. This version of firmware run on the BTR310/BTR170 module and is designed and targeted to use in an embedded host system.

2. IO pins assignment

All the unused IO pins are input and internally pull-low by default:

1. PIO5

Input, rising edge triggered, one rising edge trigger the BTR310/BTR170 to enter the text command mode, another rising edge trigger the BTR310/BTR170 to leave any modes. All ongoing operation and connection will be canceled when exiting.

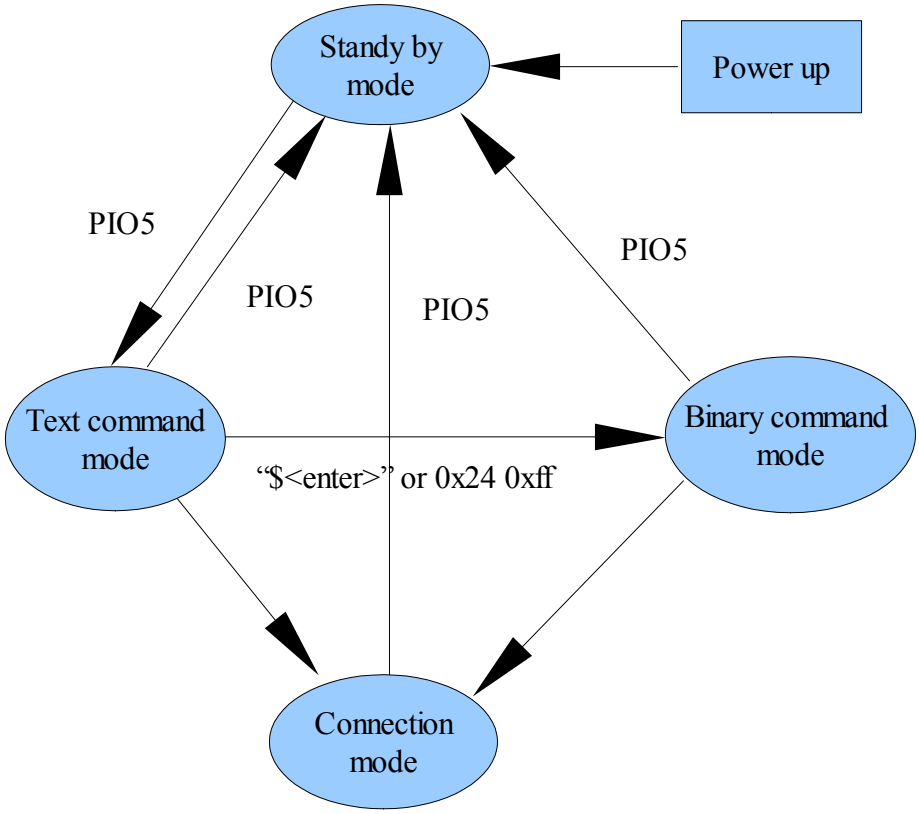
2. PIO2

Output, active high. High when the BTR310/BTR170 is in the console mode.

3. PIO6

Output, active high. High when the BTR310/BTR170 is connected.

2. State Diagram



3. Text Command Mode Operation

Note: text command mode is used for the convenience of evaluation and testing of the module using Hyperterminal in PC. We strongly recommend you enter binary command mode for normal operation and application. The future enhancement will be done for binary command mode only. The text command mode will not be further supported and probably be deleted without notifying user.

Press PIO5 to enter the text command mode, a banner is displayed

SPPxxx console mode vx.x
dev addr: 8 e0 fe0035
>_

Now the host can issue commands to control the BTR310/BTR170 module or isuue "$<enter>" or 0x24 0xff to enter binary command mode. Press PIO5 again, the module exit to standy mode and print:

exit console mode!

3.1 Text Command List

All the connection related commands have a default timeout value of 60 seconds except the no timeout version.

iq (*In*quiry)
Perform Inquiry for the nearby Bluetooth devices. A list of inquired devices will be listed.

>iq

inquiring...

0: W800i
dev addr: 12 ee 742f70
1: K700i
dev addr: e 7 750521
2: Nokia 6600
dev addr: 60 57 99b44e
3:
dev addr: 60 57 8a35de
4:
dev addr: 60 57 28cbb5

5: T610
dev addr: a d9 9690c9
6: :-)Mike
dev addr: f de 94f962
7: Jonathan
dev addr: a d9 3090c0
8: mikelee0
dev addr: 8 e0 19788
inquiry completed!
>

0-9 (Select Remote Device)
Press Number 0 – 9 to select the desired remote device.

>2
addr: 60 57 99b44e

remote device 2 selected.

>

cm (*C*onnect as *M*aster)
Connect as master to the selected device.

>cm
connecting as master...
connected!

cs (*C*onnect as *S*lave)
Connect as slave.

csa (*C*onnect as *S*lave, *A*lways)
This is a version of "Connect as Slave" that has no timeout. i.e. It will keep waiting until a connection occur or the module exits console mode.

pm (*Pair* as *Master*)
Initiate pairing process. It will prompt for a pin code.

>pm
pairing as master...
pin code? 0000
pairing success!
>_

cmp (*C*onnect as *M*aster – *P*aired)
After pairing the remote device's bluetooth address and link key will be stored. So just ***cmp*** and the BTR310/BTR170 will connect to the paired device.

>cmp
connecting to paired device...
connected!

Note the difference between ***cmp*** and ***cm*** commands. For ***cm***, the user has to inquiry the nearby bluetooth, select it by typing 0 – 9, and then connect it. For ***cmp***, Once the user has paired with a remote device, he can connect it by just typing cmp, even the BTR310/BTR170 has exit and re-enter console mode.

cmb (*C*onnect as *M*aster - *B*luetooth address)
Connect to a specific Bluetooth address directly.

>cmb
connecting to remote device...
addr? 0008e000009c
connecting as master...
connected!

The format of the bluetooth address is nap (4 bytes), uap (2 bytes), lap (6 bytes), So for connecting to dev addr: 8 e0 9c, you need to pad the nap, uap and lap with leading zeros as shown above.

ps (*P*air as *S*lave)
Initiate pairing process as a slave.

csp (*C*onnect as *S*lave – *P*aired)
Waiting connection from the paired device.

cspa (*C*onnect as *S*lave – *P*aired, *A*lways)
No timeout version of **csp**

lpd (*L*ist *P*aired *D*evice)

>lpd
dev addr: 8 e0 2e
>_

cpd (*C*lear *P*aired *D*evice)

>cpd
paired device cleared!
>_

dc (*D*is*C*overable)

>dc
discoverable for 1 minute...
discoverable timeout!
>_

sbr (*S*et *B*aud *R*ate)

>sbr
set baudrate...
baudrate? 576
baudrate set! effective when entering console next time.
>_

The vaild baudrate are 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800, 921600. The last two zeros of the baudrate is not needed when setting the baudrate.

4. Binary Command Mode Operation

In text command mode, type "$<enter>" for using Hyperterminal or 0x24 0xff for using MCU to enter this mode.

4.1 Binary command list

Please refer to SPP330 Command Set

5. Hardware Setting

5.1 PIO settings

State	PIO	Input/Output
Connected LED	PIO 6	Output
Console LED	PIO 2	Output
Console Button	PIO 5	Input

PIO voltage levels:

Logic high: 3V-3.3V
Logic low: Ground